

Appln No. 09/703,264

Amdt date August 2, 2005

Reply to Office action of November 2, 2004

Amendments to the Specification:

Please replace the first paragraph beginning on page 8 and ending on page 9, with the following rewritten paragraph:

To minimize delay, the downsampler 208 does not low pass filter the near end Tx data samples 210 prior to decimation. Aliasing components that may be created are insignificant because the output of the downsampler 208(a) simply drives the double talk detection logic 212 and is not transmitted to the far end. An energy estimator 214 estimates the background noise level of the decimated near end Tx data signal 208(a) and forwards the estimated level to the double talk logic 212. The energy estimator ~~[[212]]~~ 214 may be a low pass filter with a long time constant, on the order of about 10 seconds. With a long time constant the energy estimator tends to track the minimum energy level of the decimated near end Tx data signal 208(a). Similarly, a second energy estimator ~~[[217]]~~ 216 estimates the short term energy of the combined reference signal 237(a).

Please replace the third paragraph on page 10, with the following rewritten paragraph:

In the described exemplary embodiment, there is a delay associated with decimator 220. However, downsampler 208 does not low pass filter the near end TX data 210 and therefore does not have a corresponding delay. Therefore, the double talk logic ~~[[200]]~~ 212 receives downsampled near end Tx data samples

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208(a) with negligible delay and can process near end Tx data samples prior to their arrival at the difference operator 206. Thus, the delay associated with the second decimator 220 provides a look-ahead of M samples allowing the double talk logic 212 to disable adaptation of the adaptive filter 200, M samples before the near-end signal reaches the difference operator 206. The look ahead capability M is equivalent to the delay associated with the second decimator 220 and is typically two to three 8kHz samples for a ITU-T G712 compliant system.